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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,528	01/03/2006	Walter Stieglbauer	STIEGLBAUER W. ET AL-4 PC	1506
25889	7590	09/14/2011	EXAMINER	
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			JENNISON, BRIAN W	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,528	Applicant(s) STIEGLBAUER ET AL.	
	Examiner BRIAN JENNISON	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-10, 19, 21-23 and 25-29 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-10, 19, 21-23 and 25-29 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10, 19, 21-23 and 25-29 rejected under 35 U.S.C. 103(a) as being obvious over **Erras et al (DE 44 16 504 as cited by applicant), references made to machine translation, as modified by Caprioglio (US 5,811,750) in view of Nishimura (JP 05192774 as cited by applicant), Suita (US 2001/0045413) and Okita (JP 08118037) as cited by applicant with references made to abstract.**

Erras et al teaches:

Regarding Claims 1, 19 and 21: Spot welding tongs for robotic applications for the resistance welding of workpieces and, in particular, sheet metals, (**“robot-led welding tongs” used to perform resistance welding See Paragraph 7, Line 13 of machine translation provided**) of the type including tong arms which are each pivotally mounted on a base body (**Tongs are defined as any of various implements consisting of two arms hinged, pivoted, or otherwise fastened together, for seizing, or holding**) and adjustable by an actuating means (**Since the tongs are robotic they must include an actuating means for moving the tongs to perform the welding**) and to which electrode holders for the electrodes (**See Fig. 2 which**

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shows the electrode holder 1 and the electrode cap 4) are fastened, and further including winding means comprising a wind-off roller and a wind-up roller for winding off and on a strip for the protections of at least one electrode, **(See Paragraph 12 which describes the coil 9a for unwinding the strip 10 and the coil 9b for winding up the strip 10 for protecting the electrode.)** wherein the wind-off roller and the wind-up roller (ii) of the winding means are arranged on the base body or on the tong arm, **(the coils 9a and 9b are capable of being arranged on the plurality tong arms 2)** and that at least one guiding groove is provided on the electrode holder for the guidance of the strip along the tong arm. **(See Fig 3 which shows the recess 7 for guiding the strip section 5 along the tong arms 2. See also Paragraph 11, Line 1)** (re claims 19 and 21) plurality of tong arms which would be pivotally mounted on a base, the electrode holders 1, two electrodes, winding mechanism. **See Figs 1 and 3.** (re claims 20 and 21)The guide groove 7 is on the electrode holders. **See Fig 3.)**

Erras discloses the claimed invention except for the winding rollers on the body. It would have been obvious to one of ordinary skill in the art at the time the invention made to have the winding rollers on the body, since it has been held that rearranging parts of an invention involves only routine skill in the art. (In re Japiske, 86 USPQ 70.)

Erras et al fails to teach

Regarding Claims 1, 19 and 21: at least one guiding groove comprising a recess on the tong arm. The pressure element and spacer wherein said spacer and said pressure

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element are configured to lift said strip from said at least one electrode during or after an opening of the spot welding tongs to protect the electrodes wherein the spacer and the pressure element are moveable relative to the electrode

Regarding Claim 2: Spot welding tongs wherein means for guiding and deflecting the strip, in particular deflection pulleys and slide surface, are provided on the tong arm and/or electrode holder.

Caprioglio teaches:

Regarding Claim 1: Fig 2 shows rollers with grooves having a recess along the length of the tong arm, with the rollers being located on the tong arms.

In view of the teachings of Caprioglio it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Erras the guide groove with a recess since Caprioglio teaches rollers with a guide groove and recess which form a groove with a recess along the length of the arm for guiding the strip during welding.

Okita discloses regarding claims 1, 19 and 21, a spacer 6 and 7 which will lift the strip off the electrode. (See Drawing 3) A pressure element in the form of a spring 62 is attached to the spacer. The spring and spacer being in the region of the electrode. It would have been obvious to adapt Erras as modified in view of Okita to provide the

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spacer movable attached to the electrode and to lift the strip off the electrode for reducing electrode wear.

Erras et al as modified by Caprioglio fails to teach:

Regarding Claim 19, 21-24: The pressure element and spacer.

Suita teaches:

Regarding Claims 1, 19 and 21-23: Figs 2a, 2b, 3a, 3b and 4 show a pressure element in the form of a fixed side sensor 23A, 23B, 23C or 23D for detecting pressure and a spacer between the sensor in the region (near) of the electrode cap. **See Paragraphs [0081], [0082], [0083].**

In view of the teachings of Suita it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Erras as modified by Caprioglio the pressure sensor and space since Suita teaches a pressure sensor and spacer in the region of the electrode for detecting a pressing force imposed on the welding tip.

Erras et al also teaches:

Regarding Claim 2: The coils 9a and 9b would be mounted on the tong are or the holder.

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Regarding Claim 3: The coils 9a and 9b are operated by a driving mechanism for feeding the strip 10. See Paragraph 7, Lines 10-11

Regarding Claim 4: Fig 3 shows a recess 7 in the base of the arm which is formed by two sides extending beyond the base section.

Regarding Claim 5: The receptacles 8, as seen in Fig 4, cover the recess 7 and are arranged on the end of the sides which extend beyond the base to form the recess 7.

Regarding Claim 6: Fig 3 shows a recess 7 in the base of the arm which is formed by two sides extending beyond the base section.

Regarding Claim 7: The receptacles 8, as seen in Fig 4, form a u-shaped groove which cover the recess 7 and are part of the groove or recess for guiding the strip over the electrode.

Regarding Claim 8: The receptacles 8, as seen in Fig 4, are provided for forming a hollow section on the tong arms for guiding the strip. See Paragraph 11, Lines 5-6

Erras et al fails to teach: (re claim 9), a braking device is provided to fix and stretch the strip. (re claim 10), the braking device is connected with a control unit. (re claims 19 and 21), actuating means and the winding rollers on the base body.

Nishimura teaches (re claims 1 and 9) The 1st rolling-up means 31 is attached to the upper electrode 5 side of the welding gun 1. The 1st rolling-up means 31 comprises the stepping motor 32, the torque sensor 33, the connecting shaft 34, and the driven shaft 35. The torque sensor 33 is connected with the output shaft of the stepping motor 32.

(See Paragraph 25, Lines 1-3) The torque sensor allows the motor to function as a brake capable of fixing and stretching the strip, if the wind up motor is running when the wind off motor is stopped, in a spot resistance welding device. (re claim 10) Drive controlling of the stepping motor 32 is carried out by the control means 81. **(See Paragraph 25, Line 7)** The control unit stops and starts each motor and reel. (re claims 19 and 21) Nishimura teaches the actuating means shown in drawing 2 for adjusting the tong arms.

In view of Nishimura's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include, the brake and controlling unit since, Nishimura teaches a device including, a torque sensor, stepping motor, connecting shaft and driven shaft, functioning as a brake since, Nishimura teaches these devices for detecting and fixing abnormalities of the band which protects the welding electrode and the actuating means or pneumatic cylinder for moving the tong arms to perform the welding process.

Erras et al also teaches:

Regarding Claims 25-27: Fig 4 shows spacers 8 which lift the strip off the electrode cap.

Erras et al as modified fails to teach regarding claims 28 and 29, the actuator comprising a cylinder and a servomotor. Suita discloses regarding claims 28 and 29, a servo motor or air cylinder as the driving device 12. (See paragraph [0077].) It would have been obvious to adapt Erras as modified in view of Suita to provide the servo motor or air cylinder for moving the electrode arms.

Response to Arguments

1. Applicant's arguments, see pages 11 -13, filed 6/30/2011, with respect to the rejection(s) of claim(s) 1-10, 19, 21-23 and 25-29 under Stieglbauer have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Okita.

"Okita discloses regarding claims 1, 19 and 21, a spacer 6 and 7 which will lift the strip off the electrode. (See Drawing 3) A pressure element in the form of a spring 62 is attached to the spacer. The spring and spacer being in the region of the electrode. It would have been obvious to adapt Erras as modified in view of Okita to provide the spacer movable attached to the electrode and to lift the strip off the electrode for reducing electrode wear."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN JENNISON whose telephone number is (571)270-5930. The examiner can normally be reached on M-Th 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TU HOANG can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN JENNISON/
Examiner, Art Unit 3742

9/6/2011

/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742